

Work Order ID 82886

82886

Page 1

April-10-12 2:38:46 PM

Item ID: D4406-043

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Wearplate Assembly

Start Date: 10/04/2012 Start Qty: 8.00

8

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: MCT

Date: 12/04/10

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4406

B

0.00

100

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per dwg D4406-3

prog rev: B

dwg rev: P

2-Deburr if required

B12-4-13

(9)

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

B12-4-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82886

April-10-12 2:38:46 PM

82886

Page 2

Item ID: D4406-043

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Wearplate Assembly

Start Date: 10/04/2012 Start Qty: 8.00

8

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

130

0.00

130

Small Fab

Memo

0.00

Small Fab

Form as per dwg D4406

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82886

April-10-12 2:38:46 PM

82886

Page 3

Item ID: D4406-043 Accept *N9000040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Aft Wearplate Assembly
 Start Date: 10/04/2012 Start Qty: 8.00 *8* Cust Item ID:
 Required Date: 24/04/2012 Req'd Qty: 8.00 *8* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150		0.00							
-----	--	------	--	--	--	--	--	--	--

150

Large Fab

Large Fab

Memo

Weld bar as per dwg

A/R 2059b hardcoat Batch#: M122030

Weld bar to wearplate as per dwg

A/R s.s. rod Batch #: M120013

160

160

QC

Quality Control

~~QC10- Inspect visual per QSI004- ground welds.~~ 0.00

Memo

0.00

QCS

170

170

Small Fab

Small Fab

Memo

Apply coating as per dwg D4406

B122212

0.00

0.00

(x8)

MAL

12/07/04

CP 10.07.05 Pto →

(x8)

AS

12-7-5 (8)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12/07/04	#160	change step #160 to QC 9 and ADD QC 5 inspection to w/o after #160	BE 12/07/04				S 12/31/04

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82886

April-10-12 2:38:46 PM

82886

Page 4

Item ID: D4406-043
 Revision ID:
 Item Name: Aft Wearplate Assembly
 Start Date: 10/04/2012 Start Qty: 8.00
 Required Date: 24/04/2012 Req'd Qty: 8.00
 Reference:

Accept

N900040100

Setup Start ***NS1***
 Stop ***NS2***

Cust Item ID:
 Customer:

Approvals: Process Plan: Date: Tooling: Date:
 QC: Date: SPC (Y/N): Date:

Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							8 φ 12-76
190 *190* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-1</u> Memo	0.00 0.00							18 f 11/10/09
200 *200* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							OK 12/7/9 not 12-07-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 2:38:49 PM

Page 1

Work Order ID: 82886

82886

Parent Item: D4406-043

D4406-043

Parent Item Name: Aft Wearplate Assembly

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP Rev A 11.06.06new issue EC verified by:DD
12.02.06 as per dwg revPB1 DD verf:EC

IPP rev B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S18GA

Purchased

No

100

sf

169.7860

2.92

24.58947

**

M304S18GA

304/316 .050 Sheet

27.
1812-4-13

Location

Loc Qty

Loc Code

MAT020

158.786

119032

2.3

119383

33.486

119766

3

120604

120

MAT20

11

121192

11

120604

(9)

D4407-3

Manufactured

No

150

Each

12.0000

2

16

**

D4407-3

Bar

EL 12-6-28

Location

Loc Qty

Loc Code

ENG

-10

WA

22

80759

8

80796

4

83308 x16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

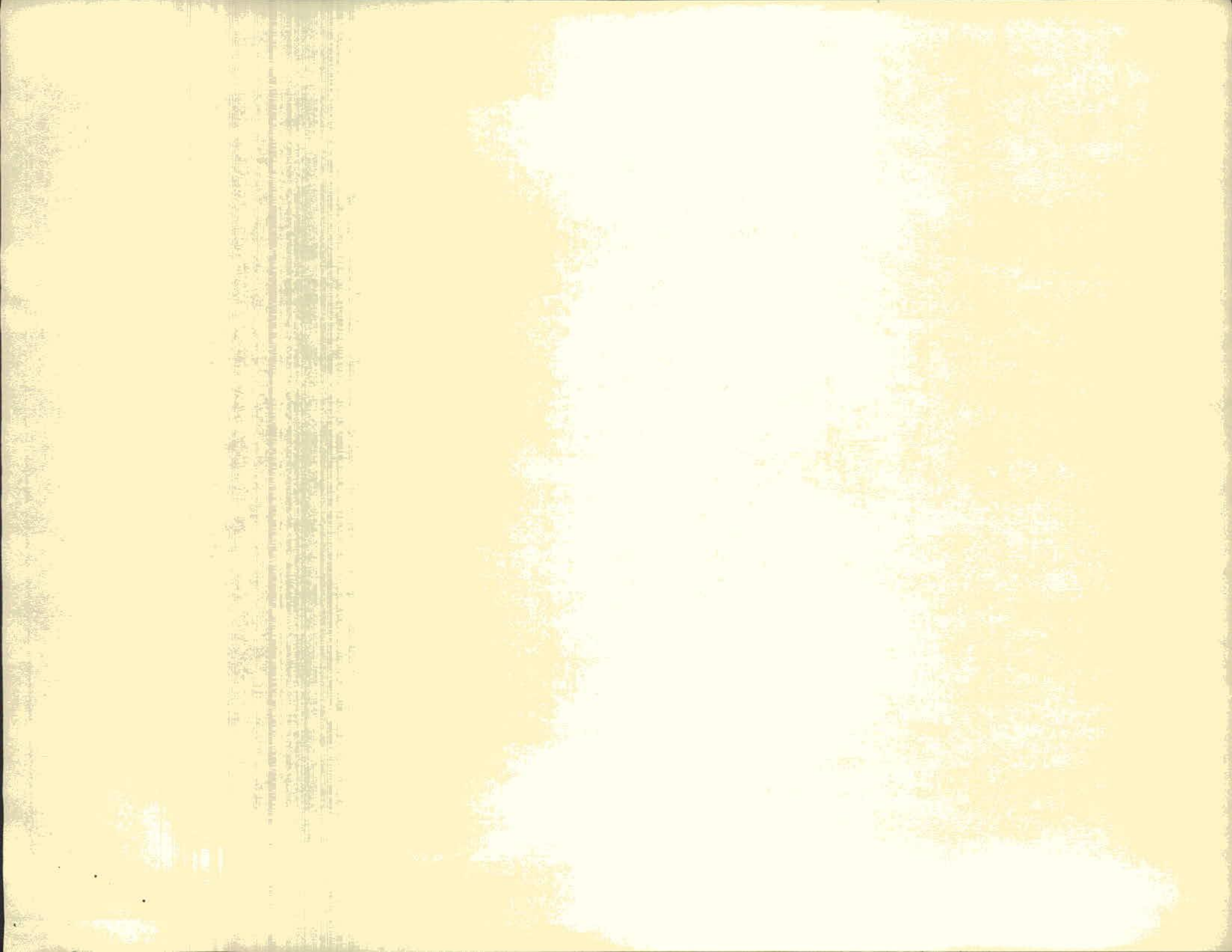
DART AEROSPACE LTD		Work Order:	02886
Description: Plate		Part Number:	D4406-3
Inspection Dwg: D4406 Rev: B		Page 1 of 1	

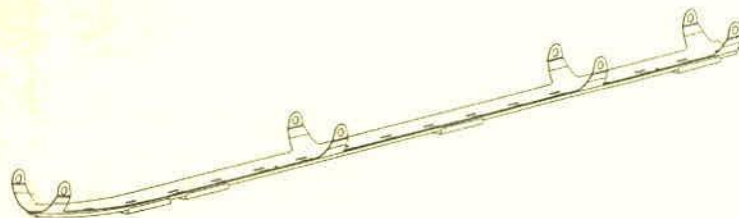
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.561	+/-0.010	.562			V RBZ	
0.30	+/-0.030	.297			V	
0.88	+/-0.030	.88			V	
0.13	+/-0.030	.129			V	
0.31	+/-0.030	.31			V	
24.995	+/-0.010	24.995			T 1Bul	
47.958	+/-0.010	47.958			T	
54.178	+/-0.010	54.178			T	
2.43	+/-0.030	2.421			V	
7.77	+/-0.030	7.784			V	
7.203	+/-0.010	7.205			V	
3.63	+/-0.030	3.636			V	
4.00	+/-0.030	4.001			V	
7.071	+/-0.010	7.068			V	
7.800	+/-0.010	7.793			V	
0.050	+/-0.010	.049			V	

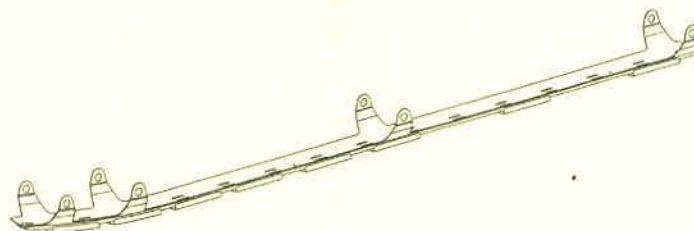
Measured by:	RB	Audited by:	8	Preliminary Approval:	
Date:	12-4-13	Date:	12/6/13	Date:	

Rev	Date	Change	Revised by	Approved
A	11.10.13	New Issue P/O D4406-043	KJ	
B	12.03.08	Dimensions revised per Dwg Rev B	KJ	





D4406-041 FWD WEARPLATE ASSY



D4406-043 AFT WEARPLATE ASSY

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
1	X		D4406-041	FWD WEARPLATE ASSY
2		X	D4406-043	AFT WEARPLATE ASSY
3	1		D4406-1	PLATE
4		1	D4406-3	PLATE
5	2		D4407-1	BAR
6		2	D4407-3	BAR
7	A/R	A/R	2059B	HARDCOAT
8	A/R	A/R	4714	PLUS ONE ROCKGUARD (SEE NOTE 10, SHT 2 & 3)

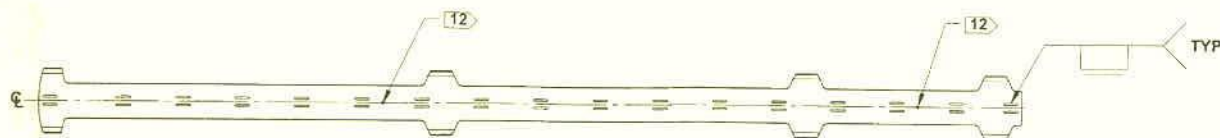
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO 82886 MLC

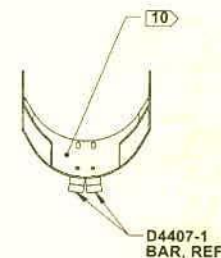
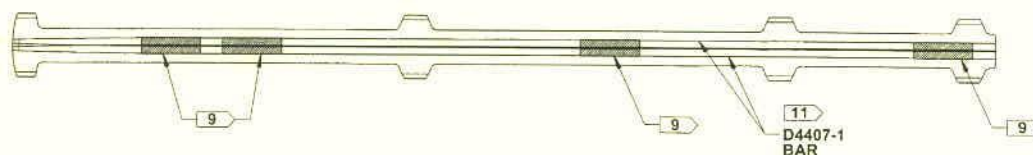
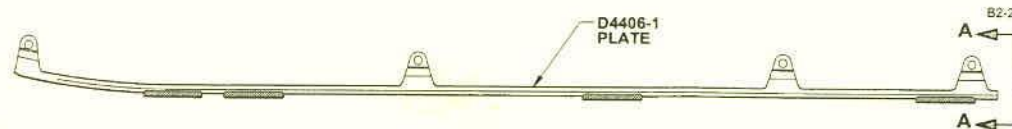
12/04/10

RELEASE
2012-02-23
MD

B	REVISE BILL OF MATERIAL, ADD NOTE 13/14 & REVISE NOTE 6 SHT 2 & 3, MODIFY DETAIL E & F (ZN B3-6, C2-6), ADD DETAIL G (ZN C7-6), REVISE D4406-3F TAB LOCATIONS (ZN B5-5)	RF	12.02.16
A	NEW ISSUE	RF	11.08.15
REV	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4406	SHEET 1 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
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82886



D4406-041 FWD WEARPLATE ASSY

SECTION A-A C3-2
SCALE 2X

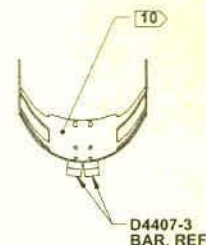
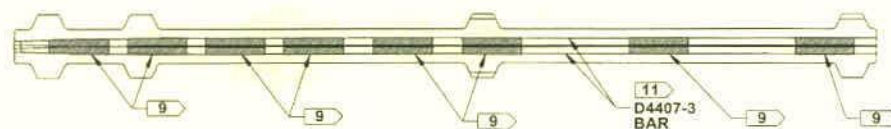
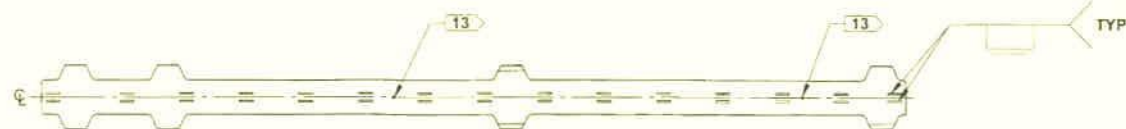
RELEASED
2012-02-23
MP

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.40 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4407-1 BAR ON LATERAL SURFACES
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 11) FORM TO MATCH PROFILE OF D4406-1 AT TIME OF WELDING
- 12) TRANSFER $\varnothing 0.188$ HOLES FROM D4406-1 TO D4407-1
- 13) NOTCH D4407-1 BARS AS REQUIRED TO FORM TO D4406-1 PLATE



DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	JS	DRAWING NO. D4406	REV. B
MFG. APPR.	JS	SHEET 2 OF 6	
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DATE	12.02.16		



D4406-043 AFT WEARPLATE ASSY

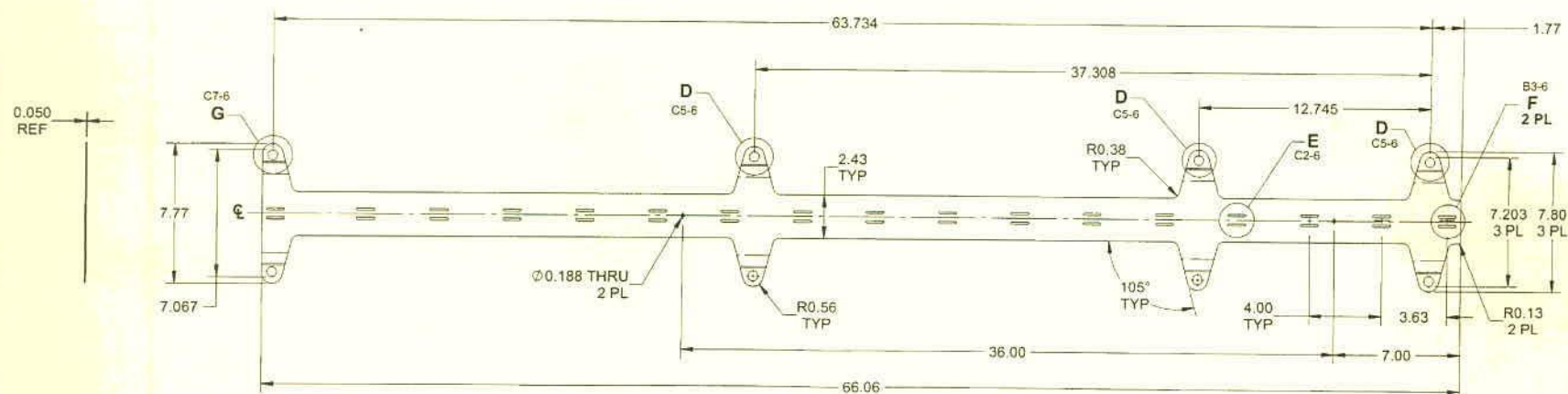
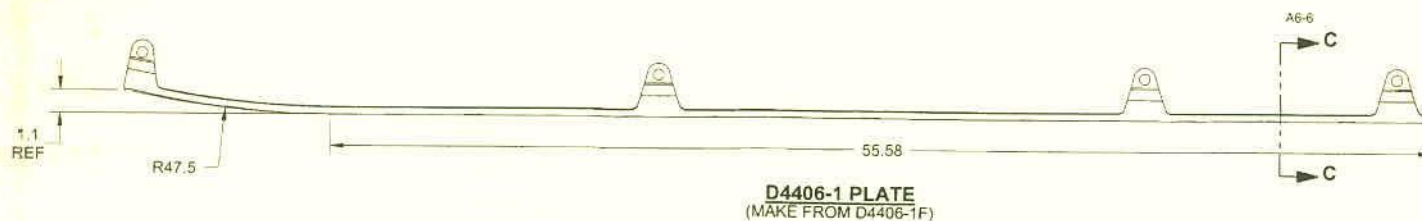
SECTION B-B C3-3
SCALE 2X

RELEASE
2012-02-23
JMD

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.73 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4407-3 BAR ON LATERAL SURFACES
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 11) FORM TO MATCH PROFILE OF D4406-3 AT TIME OF WELDING
- 12) FILL TOOLING HOLE WITH WELD ONE PLACE ONLY
- 13) TRANSFER: $\varnothing 0.188$ HOLES FROM D4406-3 TO D4407-3
- 14) NOTCH D4407-3 BARS AS REQUIRED TO FORM TO D4406-3 PLATE

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D4406	SHEET 3 OF 6
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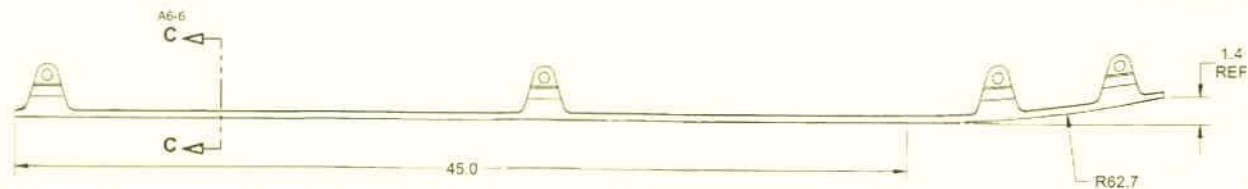


NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.050 THICK (18 GAUGE)
PER AMS 5513 OR 5524
OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.7 lbs

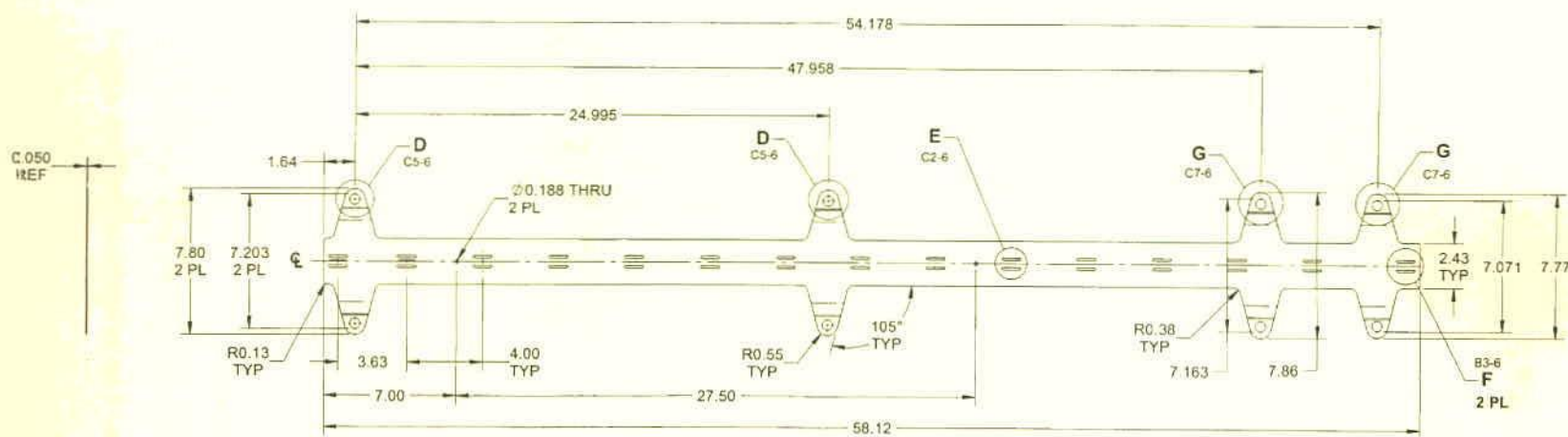
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NM

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DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4406	SHEET 4 OF 6
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D4406-3 PLATE
(MAKE FROM D4406-3F)

02886



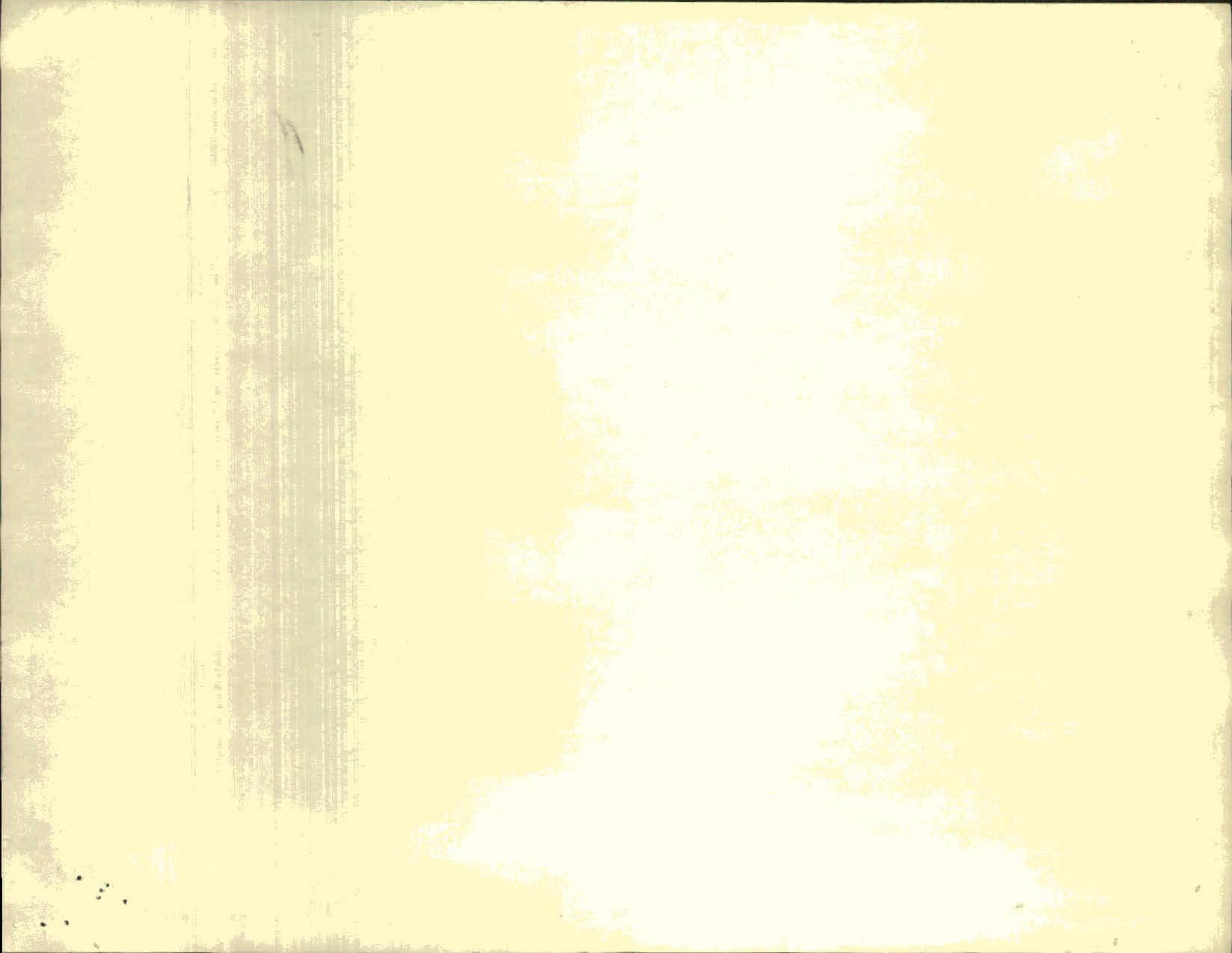
B D4406-3F FLAT PATTERN

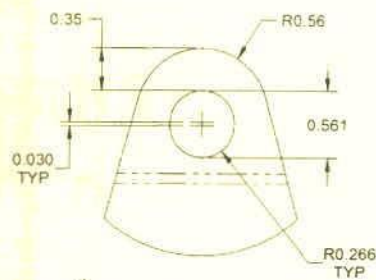
RELEASED
2012-02-23

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.050 THICK (18 GAUGE)
PER-AMS 5513 OR 5524
OR ASTM A240 OR ASME SA240
REF: DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.4 lbs

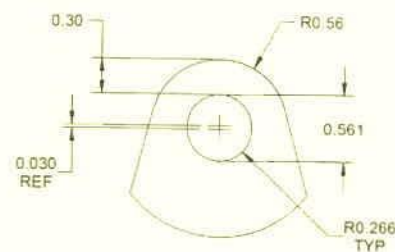
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DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4406	SHEET 5 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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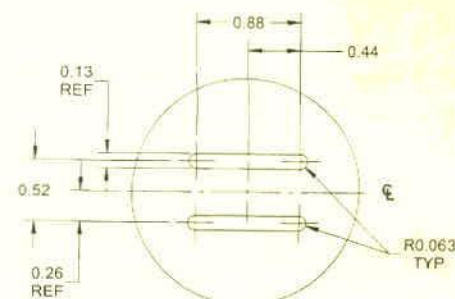
DETAIL G
SLOT DETAIL TYP
SCALE 6X

C7-4
C2-5
C3-5



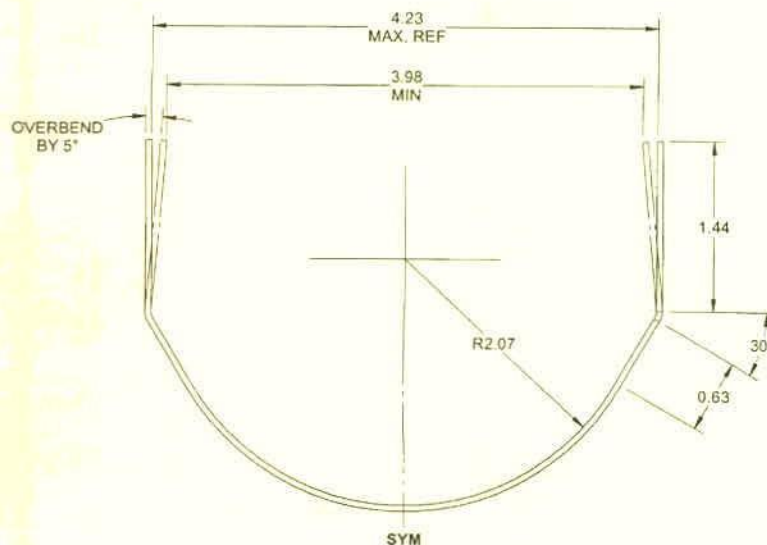
DETAIL D
SLOT DETAIL TYP
SCALE 6X

C2-4
C3-4
C5-5
C6-5



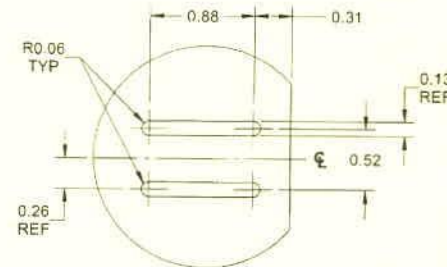
DETAIL E
SLOT DETAIL TYP
SCALE 6X

C2-4
C4-5



DETAIL C
DETAIL TYP
SCALE 6X

D2-4
D6-5



DETAIL F
SLOT DETAIL TYP
SCALE 6X

C1-4
B1-5

RELEASED
2012-02-23
WMP

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4406	SHEET 6 OF 6
APPROVED		TITLE	SCALE
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